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June 21, 2018

RECEIVED

Gwen R. Pinson Executive Director Kentucky Public Service Commission 211 Sower Boulevard Frankfort, Kentucky 40602

JUN 22 2018

PUBLIC SERVICE COMMISSION

Re: In the Matter of The 2017 Integrated Resource Plan Of Big Rivers Electric Corporation, Case No. 2017-00384

Dear Ms. Pinson:

Please find enclosed for filing the original and ten copies of Ben Taylor and Sierra Club's Initial Requests for Information to Big Rivers Electric Corporation in Case No. 2017-00384 before the Kentucky Public Service Commission.

This filing contains no confidential information. If you need anything else, please let me know.

Thank you for your attention to this matter.

Sincerely,

Joe F. Childers

Enc.

JUN 2 2 2018

## COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

PUBLIC SERVICE COMMISSION

IN THE MATTER OF: THE 2017 INTEGRATED

Case No. 2017-00384

:

:

RESOURCE PLAN OF BIG RIVERS ELECTRIC

CORPORATION

# BEN TAYLOR AND SIERRA CLUB'S INITIAL REQUESTS FOR INFORMATION TO BIG RIVERS ELECTRIC CORPORATION

Intervenors Ben Taylor and Sierra Club (collectively "Environmental Intervenors"), pursuant to the Kentucky Public Service Commission's ("Commission") November 9, 2017, Order, propound the following requests for information on the Big Rivers Electric Corporation's ("Big Rivers" or "BREC") filing in the above captioned proceeding.

Big Rivers shall answer these requests for information in the manner set forth in the November 9 Order and by no later than the July 20, 2018, deadline set forth in the Appendix of the November 9 Order. Please produce the requested documents in electronic format to:

Shannon Fisk Earthjustice 1617 John F. Kennedy Blvd., Suite 1130 Philadelphia, PA 19103 sfisk@earthjustice.org

Mychal Ozaeta Earthjustice 1617 John F. Kennedy Blvd., Suite 1130 Philadelphia, PA 19103 mozaeta@earthjustice.org

Matthew Miller Sierra Club 50 F Street NW, 8th Fl Washington, DC 20001 matthew.miller@sierraclub.org

Frank Ackerman Synapse Energy Economics 485 Massachusetts Avenue, Suite 2 Cambridge, MA 02139 FAckerman@synapse-energy.com

Wherever the response to an interrogatory or request consists of a statement that the requested information is already available to the Environmental Intervenors, provide a detailed citation to the document that contains the information. This citation shall include the title of the document, relevant page number(s), and to the extent possible paragraph number(s) and/or chart/table/figure number(s), as well as a hyperlink, if applicable.

In the event that any document referred to in response to any request for information has been destroyed, specify the date and the manner of such destruction, the reason for such destruction, the person authorizing the destruction, and the custodian of the document at the time of its destruction.

The Environmental Intervenors reserve the right to serve supplemental, revised, or additional discovery requests as permitted in this proceeding.

#### **DEFINITIONS**

Unless otherwise specified in each individual interrogatory or request, "you," "your," "Big Rivers," "BREC," or "Company" refers to Big Rivers Electric Corporation, and its affiliates, employees, and authorized agents.

"And" and "or" shall be construed either conjunctively or disjunctively as required by the context to bring within the scope of these interrogatories and requests for production of documents any information which might be deemed outside their scope by another construction.

"Any" means all or each and every example of the requested information.

"CO2" means carbon dioxide.

"Communication" means any transmission or exchange of information between two or more persons, whether orally or in writing, and includes, without limitation, any conversation or discussion by means of letter, telephone, note, memorandum, telegraph, telex, telecopy, cable, email, or any other electronic or other medium.

"CSAPR" means the Cross-State Air Pollution Rule.

"Document" refers to written matter of any kind, regardless of its form, and to information recorded on any storage medium, whether in electrical, optical or electromagnetic form, and capable of reduction to writing by the use of computer hardware and software, and includes all copies, drafts, proofs, both originals and copies either (1) in the possession, custody or control of the Companies regardless of where located, or (2) produced or generated by, known to or seen by the Companies, but now in their possession, custody or control, regardless of where located whether or still in existence.

Such "documents" shall include, but are not limited to, applications, permits, monitoring reports, computer printouts, contracts, leases, agreements, papers, photographs, tape recordings,

transcripts, letters or other forms of correspondence, folders or similar containers, programs, telex, TWX and other teletype communications, memoranda, reports, studies, summaries, minutes, minute books, circulars, notes (whether typewritten, handwritten or otherwise), agenda, bulletins, notices, announcements, instructions, charts, tables, manuals, brochures, magazines, pamphlets, lists, logs, telegrams, drawings, sketches, plans, specifications, diagrams, drafts, books and records, formal records, notebooks, diaries, registers, analyses, projections, email correspondence or communications and other data compilations from which information can be obtained (including matter used in data processing) or translated, and any other printed, written, recorded, stenographic, computer-generated, computer-stored, or electronically stored matter, however and by whomever produced, prepared, reproduced, disseminated or made.

Without limitation, the term "control" as used in the preceding paragraphs means that a document is deemed to be in your control if you have the right to secure the document or a copy thereof from another person or public or private entity having actual possession thereof. If a document is responsive to a request, but is not in your possession or custody, identify the person with possession or custody. If any document was in your possession or subject to your control, and is no longer, state what disposition was made of it, by whom, the date on which such disposition was made, and why such disposition was made.

For purposes of the production of "documents," the term shall include copies of all documents being produced, to the extent the copies are not identical to the original, thus requiring the production of copies that contain any markings, additions or deletions that make them different in any way from the original

"Identify" means:

- (a) With respect to a person, to state the person's name, address and business relationship (e.g., "employee") to Big Rivers;
- (b) With respect to a document, to state the nature of the document in sufficient detail for identification in a request for production, its date, its author, and to identify its custodian. If the information or document identified is recorded in electrical, optical or electromagnetic form, identification includes a description of the computer hardware or software required to reduce it to readable form.

"NOx" means nitrogen oxides.

"Relating to" or "concerning" means and includes pertaining to, referring to, or having as a subject matter, directly or indirectly, expressly or implied, the subject matter of the specific request.

"SCR" means selective catalytic reduction technology.

"SO<sub>2</sub>" means sulfur dioxide.

#### **PRIVILEGE**

If you claim a privilege, including, but not limited to, the attorney-client privilege or the work product doctrine, as grounds for not fully and completely responding to any interrogatory or request for production, describe the basis for your claim of privilege in sufficient detail so as to permit the Environmental Intervenors and the Commission to evaluate the validity of the claim. With respect to documents for which a privilege is claimed, produce a "privilege log" that identifies the author, recipient, date and subject matter of the documents or interrogatory answers for which you are asserting a claim of privilege, and any other information pertinent to the claim that would enable the Environmental Intervenors and the Commission to evaluate the validity of such claims.

#### **REQUESTS FOR INFORMATION**

- 1. Refer to page 26, footnote 16, of the IRP. Confirm that the "Illinois Technical Reference Manual" referenced therein is the document located at this link <a href="http://ilsagfiles.org/SAG\_files/Technical\_Reference\_Manual/Version\_6/Final/IL-TRM\_Version\_6.0\_dated\_February\_8\_2017\_Final\_Volumes\_1-4\_Compiled.pdf">http://ilsagfiles.org/SAG\_files/Technical\_Reference\_Manual/Version\_6/Final/IL-TRM\_Version\_6.0\_dated\_February\_8\_2017\_Final\_Volumes\_1-4\_Compiled.pdf</a> If not confirmed, identify and produce the Illinois Technical Reference Manual.
- Refer to page 39 of the IRP. Produce SERC's audit of Big Rivers' compliance with North American Electric Reliability Corporation ("NERC") Planning Standards, Operating Standards, and Critical Infrastructure Protection ("CIP") Cyber Security Standards.
- 3. Refer to page 40 of the IRP. With regards to recommendations of the Focused Audit:
  - a. Produce any studies that have commenced or been completed related to the sale, retirement, or redevelopment of the Coleman Station.
  - b. State whether Big Rivers has revisited strategic options for the Wilson facility.
    - i. If so, produce any reports, studies, analyses, and/or data regarding the strategic options for the facility.
    - ii. If not, explain why not and identify when Big Rivers plans to revisit strategic options for the facility.
  - c. Identify any further progress Big Rivers has made, since the 2017 IRP was completed, pursuing increased sales to existing and new load, including new members.

- 4. Refer to page 41 of the IRP. With regards to the various power purchase contracts mentioned:
  - a. Identify the amount of capacity, the specific years of the contract, and the price for the contracts with the cities of California, Centralia, Hannibal, Kahoka, and Marceline in Missouri for three years.
  - b. Identify the amount of capacity, the specific years of the contract, and the price for the contract with the "national power marketer" for six years, and provide the identity of such marketer.
- 5. Refer to pages 44 and 100 of the IRP. With regards to the currently idled Coleman Station, and the potential for restarting that plant:
  - a. Identify the overall cost of restarting the Coleman Station.
  - b. Identify by project and cost any capital expenditures that Big Rivers would have to incur under each of the following environmental regulations in order to restart the Coleman Station:
    - i. Clean Air Act Mercury and Air Toxics Standard ("MATS")
    - ii. Clean Water Act Effluent Limitation Guidelines ("ELGs")
    - iii. Section 316(b) of the Clean Water Act
    - iv. Cross State Air Pollution Rule ("CSAPR")
    - v. Coal Combustion Residuals ("CCR") Rule
    - vi. Any other environmental law or regulation
  - c. Identify any potential capital and/or major maintenance projects that would be necessary to restart the Coleman Station.
  - d. Produce any studies, analyses, modeling, and data evaluating whether or when to restart the Coleman Station.
  - e. State whether Big Rivers has evaluated the levels to which energy prices, capacity prices, peak demand, and/or energy requirements would have to increase in order for it to be economic to bring the Coleman Station back online.
  - f. Identify the annual cost of keeping the Coleman Station idled.
- 6. Refer to page 44, footnote 32 of the IRP. With regards to MISO's termination of the interconnection for the Coleman Station:
  - a. Confirm that the Federal Energy Regulatory Commission ("FERC") denied Big Rivers' request for rehearing in November 2017.
  - b. State whether the Midcontinent Independent System Operator ("MISO") has terminated the interconnection service for the Coleman Station.
    - i. If so,
      - 1. Identify when the interconnection service was terminated; and
      - 2. Identify the cost of restoring interconnection service into MISO for the Coleman Station.
    - ii. If not, explain why not and identify when MISO is expected to terminate interconnection service for the Coleman Station.

- 7. Refer to page 50 of the IRP. Produce the February 2017 review of the 2015 Load Forecast referenced therein.
- 8. Refer to Table 4.2 on page 52 of the IRP.
  - a. Identify the actual peak demand in 2017 for Rural System, Direct Serve, Native System, Non-Member Load, Henderson Municipal Power & Light ("HMP&L"), and Total Peak demand.
  - b. For each of the years 2017 through 2036, identify what amount of the projected Non-Member Load is Executed Sales, and what amount is Projected Sales.
  - c. Explain how the levels of Projected Sales included in the Non-Member Load set forth in Table 4.2 for each of the years 2017 through 2036 were projected.
  - d. Identify and produce any analyses, workpapers, modeling input and output files, or other documents used in projecting the levels of Projected Sales included in the Non-Member Load set forth in Table 4.2, for each of the years 2017 through 2036.
  - e. Identify Big Rivers' most recent projection, since the IRP, of the level of Projected Sales for each of the years 2018 through 2036, and identify the date such projection was made.
  - f. Identify and produce any analyses, workpapers, modeling input and output files, or other documents used in projecting the levels of Projected Sales identified in response to subsection e.
  - g. To the extent that the levels of Projected Sales identified in response to subsection e differ from those identified in response to subsection b, identify and explain each reason for such difference.
- 9. Refer to Table 4.4 on page 54 of the IRP.
  - a. Identify the actual non-member peak requirements and total system demand requirements for each of the first 5 months of 2018.
  - b. State whether Big Rivers still expects the non-member peak requirements to be at the levels identified in Table 4.4 in each of the months of June 2018 through December 2019.
    - i. If so, explain why Big Rivers still has that expectation.
    - ii. If not, explain why Big Rivers no longer has that expectation and identify what level of non-member peak requirements the company expects in each of those months.
- 10. Refer to page 55 of the IRP.
  - a. Provide the basis for the statement that the numbers of residential customers will increase at an average rate of 0.6% through 2036.
  - b. Explain how this projection was utilized in the development of the IRP.

- 11. Refer to Table 4.6 on page 57 of the IRP. Provide the basis for the change in Small Commercial and Industrial ("C&I") load projected over the 2018 through 2036 timeframe, and all analyses, documents, modeling, and data supporting such projected change.
- 12. Refer to page 61 of the IRP. With regards to "short-term optimization transactions":
  - a. Identify the level of sales in megawatt hours ("MWh") for each of the years 2015 through 2017.
  - b. Identify the net revenue (in \$) earned through such sales for each of the years 2015 through 2017.
  - c. Identify the forecasted level of sales in MWh for each of the years 2018 through 2031.
  - d. Identify the forecasted net revenue (in \$) of such sales for each of the years 2018 through 2031.
- 13. Refer to Table 6.2 on page 93 of the IRP. With regards to the "Expected Retirement Dates" for each generating unit, explain the bases for each expected retirement date, and identify and produce any analyses, workpapers, modeling input and output files, or other documents used in identifying those expected retirement dates.
- 14. With regards to each modeling run carried out as part of this IRP:
  - a. Produce all modeling input and output files (in electronic machine readable format with formulas intact) for each run.
  - b. Produce any workbooks or workpapers, in electronic, machine readable format with original formulas intact, used to develop or process inputs to the model.
  - c. Produce any workbooks or workpapers, in electronic, machine readable format with original formulas intact, used to review or process outputs of each model run.
- 15. State whether Big Rivers, or any of its consultants, modeled or otherwise evaluated any scenarios in which:
  - a. Any of the Company's generating units were retired.
  - b. MISO market capacity prices were lower than in the base case assumption.
  - c. If the answer is "yes" to either parts a or b, explain the results of such scenario, and produce any analyses, documents, modeling files, and data regarding such scenario.
  - d. If the answer is "no" to either parts a or b, explain why such scenario was not modeled or otherwise evaluated.

- 16. Refer to Table 6.5 on page 104 of the IRP.
  - a. For each of the yearly values shown on that page, provide any analyses, reports, or other documents supporting the development of these cost estimates
  - b. State whether any of the pollution controls referenced therein are included in the Base Case scenario for this IRP.
    - i. If so, identify which ones.
    - ii. If not, explain why not.
- 17. Refer to page 107 of the IRP.
  - a. Produce the 2016-2030 Long Term Financial Plan referenced therein, and, in machine readable format with formulas intact, any workpapers and modeling input and output files used in creating that plan.
  - b. Produce the updates used in the base case as listed on page 107:
    - i. Updated market power prices for energy and capacity.
    - ii. Updated spot fuel prices for coal, natural gas and fuel oil.
    - iii. Updates SEPA costs and power projections.
    - iv. Updated load utilizing the 2017 Load Forecast.
- 18. Refer to page 108 of the IRP. With regards to the resource options in the LT Plan modeling:
  - a. Explain in detail what specific factors or results would lead the model to select, in any year after 2019, the retirement, rather than continued coal-fired operation, of the Wilson plant.
  - b. Explain in detail what specific factors or results would lead the model to select, in any year after 2019, the retirement of the Green units.
  - c. Explain in detail what specific factors or results would lead the model to select, in any year after 2020, the conversion of the Green units to gas.
  - d. Explain in detail what specific factors or results would lead the model to select, in any year after 2019, the conversion of HMP&L Station 2 to gas.
  - e. Explain in detail what specific factors or results would lead the model to select, in any year after 2019, Big Rivers exiting the contract with the City of Henderson for HMP&L Station 2.
  - f. Explain why the Coleman units were not included as resource options in the LT Plan modeling.
  - g. Explain why Reid unit 1 was not included as a resource option in the LT Plan modeling.
- 19. Refer to Table 7.2 on page 112 of the IRP. With regards to the Retirement/Exit Contract Costs by Year table:
  - a. State whether the "Net Salvage Value Brownfield" costs identified therein were factored into the LT Plan modeling for each of the Wilson, Green, and

- HMP&L Station Two units. If so, explain why and how they were factored in.
- b. State whether the "Net Book Value" costs identified therein were factored into the LT Plan modeling for each of the Wilson, Green, and HMP&L Station Two units. If so, explain why and how they were factored in.

#### 20. Refer to page 114 of the IRP.

- a. Identify and produce any projections of the costs of battery storage over any of the years 2018 through 2031 that you considered in dismissing battery storage options "due to their high costs."
- b. If you did not consider any cost estimates besides those identified in Table 7.4, explain why.

## 21. Refer to Table 7.4 on page 114 of the IRP.

- a. Identify and produce any projections of the costs of wind resources over any of the years 2018 through 2031 that you considered in creating the IRP.
- b. If you did not consider any cost estimates besides those identified in Table 7.4, explain why.

#### 22. Refer to Table 7.4 on page 114 of the IRP.

- a. Identify and produce any projections of the costs of solar resources over any of the years 2018 through 2031 that you considered in creating the IRP.
- b. If you did not consider any cost estimates besides those identified in Table 7.4, explain why.

#### 23. Refer to Table 7.5 on page 115 of the IRP.

- a. Explain why the 2020-2031 cells for each of the three Resource Types identified in the table are marked with an "x" rather than containing a cost.
- b. Identify the cost assumed in the LT Plan modeling for each of the three Resource Types for the years 2020-2031.

# 24. Refer to page 116 of the IRP. With regards to the "cost estimate for natural gas conversion for the Green Units and HMP&L Station Two":

- a. Explain the results of any such evaluation that has occurred to date and produce any reports or other documents regarding such evaluation.
- b. Produce any modeling files and workpapers (in electronic, machine readable format with formulas intact) for any such evaluation that has occurred to date.
- c. To the extent that Big Rivers is still undertaking such evaluations, identify the estimated schedule for completing such evaluations.

- 25. Refer to page 119 of the IRP. With regards to natural gas prices:
  - a. Identify for each of the years 2017 through 2031 the projected price of natural gas used by Big Rivers in the IRP.
  - b. Explain the basis for such natural gas price projection.
  - c. Identify and produce any natural gas price forecasts or other reports, analyses, or documents relied on by Big Rivers in developing the natural gas price projection.
- 26. Refer to page 122 of the IRP. With regards to the maximum reserve margin of 105% used in the LT Plan modeling:
  - a. Explain why such a high reserve margin was needed to allow a new natural gas combined cycle unit to be selected by the model if the unit would be replacing existing units.
  - b. State whether Big Rivers modeled any scenarios with a maximum reserve margin lower than 105%.
    - i. If so, identify the maximum reserve margin in that scenario and explain the results of such modeling run.
    - ii. If not, explain why not.
- 27. Refer to Table 7.8 on page 123 of the IRP.
  - a. Identify each specific generation resource that is reflected in the "Generation Resource Capacity" figures for each of the years 2017 through 2031.
  - b. Identify each specific generation resource included in calculating the "Baseload Reserve Capacity" figures for each of the years 2017 through 2031.
- 28. Refer to Table 7.9 on page 124 of the IRP.
  - a. Explain why annual total generation volume is forecasted to decline by more than 1.5 million MWhs between 2019 and 2023.
  - b. Explain why annual total generation volume is forecasted to be short of load in each of the years 2021 through 2026.
- 29. Refer to page 128 of the IRP. With regards to Big Rivers' Base Case assumptions regarding the price of coal:
  - a. Identify for each of the years 2017 through 2031 Big Rivers' coal price projection
  - b. Explain the basis for such coal price projection.
  - c. Identify and produce any coal price forecasts or other reports, analyses, or documents relied on by Big Rivers in developing the coal price projection.
  - d. Identify the percent of Big Rivers' projected coal use for each of the years 2017 through 2031 that is already under a coal purchase contract.

- 30. Refer to page 133 of the IRP. State whether power purchase agreements for renewables were included as a resource option in any of the modeling scenarios or sensitivities presented in the IRP.
  - a. If so, identify the assumed cost, duration, and capacity involved in the power purchase agreements that were included.
  - b. If not, explain why not.
- 31. Refer to page 133 of the IRP. With regards to the statement, "western Kentucky is currently not a viable location for onshore wind:"
  - a. Explain the basis for this conclusion.
  - b. Produce any studies, analyses, and data that support this conclusion.
  - c. State whether Big Rivers has evaluated building, acquiring, or contracting with wind capacity in any other geographic region besides western Kentucky.
    - i. If so:
      - 1. Identify each such geographic region
      - 2. Explain what evaluation occurred and the results of that evaluation.
      - 3. Produce any reports, studies, or other documents regarding such evaluation.
    - ii. If not, explain why not.
- 32. Refer to Table 7.23 on page 141 of the IRP.
  - a. Confirm that the values therein are expressed in terms of \$/MWh. If not confirmed, identify what the values therein refer to.
  - b. Identify the actual member wholesale rates for each of the years 2014 and 2015.
  - c. Identify the projected member wholesale rates for each of the years 2018 through 2031 under the Base Case scenario modeled in the IRP.
  - d. Identify the rates charged to Big Rivers' residential, commercial, and industrial customers in each of the years 2014 through 2017.
  - e. Identify the projected rates that Big Rivers' residential, commercial, and industrial customers will be charged in each of the years 2018 through 2031.
- 33. Refer to Table 8.1 on page 146 of the IRP.
  - a. Provide project costs for all projects in table 8.1.
  - b. Explain the purpose of the Project Coleman EHV Aleris 161 kV Line additions (2 circuits) from 2017.
  - c. Explain why an idling plant needs this transmission upgrade.
  - d. State whether the Project *Hancock County LAM 1 161 kV line additions* from 2016 is the project referenced on page 42 of the IRP to accommodate the expansion of a large industrial customer of one of Big Rivers' Members.
  - e. Identify who paid for the cost of the project and state whether it was the large industrial customer or all of Big River's members.

- 34. Refer to Table 8.2 on page 147 of the IRP.
  - a. Provide the full list of Planned System Additions (2017-2013) and project costs from table 8.2.
  - b. Explain the purpose of the Projects Coleman Coleman EHV 161 kV lines 1 and 2 upgrades, and Coleman EHV Duff EHV (Vectren) 345 kW line additions planned for 2020.
  - c. Explain why an idling plant needs this transmission upgrade.
- 35. Refer to Table 4.2 on page 41 of the 2017 Load Forecast attached as Appendix A to the IRP.
  - a. Produce the projections obtained from Moody's Analytics that were used to forecast changes in economic activity.
  - b. Produce any workbooks or workpapers, in electronic, machine readable format with original formulas intact, used to develop the economic outlooks for individual members shown in Table 4.2.
  - c. Explain how the projections shown in Table 4.2 are used to develop the residential load forecast.
  - d. Explain the discrepancy between the average growth rate of residential customers stated on page 57 of the text in the IRP and the growth associated with the data in Table 4.2 of the 2017 Load Forecast.
- 36. Refer to Table 4.6 on page 49 of the 2017 Load Forecast attached as Appendix A to the IRP. Produce any studies, analyses, modeling files, and/or data used to identify the price elasticities for Big Rivers' three members.
- 37. State whether Big Rivers has evaluated the retirement, rather than idling, of any or all of the Coleman units or Reid.
  - a. If so:
    - i. Identify which unit or units were evaluated.
    - ii. Explain the results of that evaluation.
    - iii. Produce any report or other document regarding that evaluation.
  - b. If not, identify and explain each reason why not.
- 38. For each of the Wilson, Green, Coleman, Reid, and HMP&L generating units:
  - a. Produce any analysis or assessment of the economics of continued operation of such unit.
  - b. Produce the most recent condition assessment for each unit.
  - c. Produce any analysis or assessment of the impact that retirement of each unit would have on capacity adequacy, transmission grid stability, transmission

- grid support, voltage support, or transmission system reliability.
- d. Identify any transmission grid upgrades or changes that would be needed to allow for the retirement of any of the units.
- e. Produce any analysis or assessment of the need for the continued operation of each unit.
- f. Provide the remaining book value (plant balance) at the start of 2017.
- g. Provide the estimated market value of each unit at the start of 2017.
- h. Describe how Big Rivers estimated the market value of each unit.
- 39. For each of the following existing, proposed, or potential regulatory requirements, produce any evaluation of the pollution controls that would be needed, or the estimated costs that would be incurred, to bring each of Big Rivers' coal-fired electric generating units into compliance with the requirement:
  - a. 1-hour SO<sub>2</sub> National Ambient Air Quality Standards ("NAAQS").
  - b. Section 316(b) of the Clean Water Act.
  - c. Section 316(a) of the Clean Water Act.
  - d. Clean Water Act Effluent Limitation Guidelines ("ELGs").
  - e. Cross State Air Pollution Rule ("CSAPR").
  - f. Ozone NAAOS.
  - g. PM2.5 NAAQS.
  - h. Section 111(d) greenhouse gas regulations for existing sources.
- 40. Refer to Table 1-2 on page 3 of the Energy Efficiency and Demand Response Potential Study attached as Appendix B to the IRP.
  - a. Explain how Big Rivers initially settled on a \$1 million per year ("demand-side management") DSM incentives budget, and why the Company has proposed to continue that level of funding, adjusted for inflation, rather than a higher level of funding.
  - b. Given that Big Rivers' DSM Potential study finds a higher TRC Test Ratio under the \$2 million program scenario than the \$1 million program scenario, explain why the Company is not proposing to pursue that scenario.
- 41. With regards to the evaluation of demand response programs in the Energy Efficiency and Demand Response Potential Study attached as Appendix B to the IRP:
  - a. Produce any modeling files and workpapers (in electronic, machine readable format with formulas intact) evaluating the cost-effectiveness of potential Big Rivers demand response programs.
  - b. State whether the ability to bid demand response programs into MISO was factored into the evaluation of the cost-effectiveness of potential Big Rivers demand response programs.
    - i. If so, explain how such ability was factored in.
    - ii. If not, explain why not.

- c. Explain why you assumed no benefit of demand response for avoided transmission or distribution demand.
- d. State whether the Energy Efficiency and Demand Response Potential Study factored the cost savings from the retirement of existing generating units that could result from increased levels demand response and energy efficiency into assessing the cost effectiveness of such demand response and energy efficiency.
  - i. If so, explain how.
- e. If not, explain why not.
- 42. With regards to potential federal subsidies of coal facilities, such as the U.S. Department of Energy's ongoing evaluation of potentially using its purported authority under the Federal Power Act and/or the Defense Production Act to subsidize, require, or otherwise ensure the continued operation of coal and nuclear plants:
  - a. State whether Big Rivers has evaluated the possibility of receiving federal subsidies.
  - b. If so, explain how such potential subsidies were factored into the IRP.
  - c. State whether Big Rivers has evaluated the possibility of other MISO members receiving federal subsidies.
  - d. If so, explain how such potential subsidies were factored into the IRP.
  - e. Produce any studies, analyses, modeling files, and/or data used to evaluate the effects of potential federal subsidies of coal facilities.

gr + Cliles

Respectfully submitted,

Joe Childers, Esq.

Joe F. Childers & Associates

300 Lexington Building

201 West Short Street

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Dated: June 21, 2018

#### CERTIFICATE OF SERVICE

Counsel certifies that an original and ten (10) copies of the foregoing BEN TAYLOR

AND SIERRA CLUB'S INITIAL REQUESTS FOR INFORMATION TO BIG RIVERS

ELECTRIC CORPORATION were transmitted to the Commission via overnight courier for filing; counsel further states that true and accurate copies of the foregoing were mailed via First Class U.S. Mail to:

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This 21st day of June, 2018.

JOE F. CHILDERS